

# X Band Linear Solid State Power Amplifier

## 7.125-7.725 GHz, 500 Watts — Model BHED718778-500

Stellant PST introduces a solid-state power amplifier for ground mobile military communication and datalink applications, leveraging advanced GaN RF power devices. Operating from 7.125 to 7.725 GHz with a class AB design, it ensures excellent linearity and reliable performance in harsh environments. Featuring self-protection for load VSWR and temperature, it gracefully degrades under RF module failure. With high MTBF for improved reliability and lower maintenance costs, Stellant offers custom configurations across a wide frequency range and power levels



### KEY FEATURES

- Smallest Footprint SSPA
- Class AB Gallium Nitride (GaN) Technology
- High Output Power Dynamic Range
- Excellent Efficiency
- RF Output Sample Port
- Digital RF Forward/Reverse Power Monitoring
- Spectrum Regrowth -25 dBc @ 56 dBm
- Thermal and Load VSWR Protection
- Remote Status/Control Interface
- Weatherproof for Harsh Environmental Apps
- Graceful Degradation
- Cold Start




### SPECIFICATIONS

Frequency Range	7.125-7.725 GHz	AC Voltage Input	180-264 VAC 47-63 Hz 3KVA
Instantaneous 3dB Bandwidth	600 MHz	Operating Temperature	-40°C to +60°C
Rated Output Power	500 W Class AB	Operating Humidity	0 to 100% condensing
Power Gain	50 dB (minimum)	Operating Shock & Vibration	Per MIL-STD-810G
Gain Adjustment	-10 dB (minimum)	Operating Altitude	10,000 ft
Gain Variation at 500 W	± 1.6 dB (Full Band)	MTBF	> 50K Hours
Gain Variation at any Power	± 0.5 dB (any 40 MHz)	RF Power Monitoring	Fwd, Rev, Input
Gain Stability at 500 W	± 0.25 dB (24 hours)	Control Interface	RS485, RS232
Gain Slope	± 0.02 dB/MHz (Typical)	<b>RF Connectors</b>	
Duty Cycle	100%	RF Input	Type N (F)
AM/PM Conversion	3.5°/dB @ Prated -1dB	RF Output	CPR-112G WG Flange
Spectrum Regrowth (QPSK)	-25 dBc @ Prated -1dB QPSK ±1 to 1.5 Symbol rate offset	RF Monitoring 50 dB	Type N (F) Front Panel
Output Load VSWR	< 1.5:1	EMI/EMC Requirements	MIL-STD-461G CE102, CS114, CS115, CS116, RE102, CE106, RSD103
Load VSWR Protection	2:1 VSWR (No Damage)	Size	14" x 10.4" x 23"
Harmonics	-77 dBc	Weight	65 lbs
Noise Figure	18 dB (Max)		

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